

collection, has convinced me of the incorrectness of the last part of Prof. Huxley's description. In fact, the Trogons are not in the slightest degree desmognathous, but schizognathous, Prof. Huxley's error having probably been due to the imperfect preparation of the specimen which he inspected.

As will be evident from the drawing I now exhibit (see figure) of



Palate of *Pharomacrus mocinno*.

the palate of *Pharomacrus mocinno*, the somewhat spongy and remarkably transverse maxillo-palatines do *not* unite with each other, or with any median ossification, across the central line. On the contrary, their inner ends are free both from each other, from the lower border of the nasal septum, which is ossified, and from the thin and filiform vomer, which runs between their ends to terminate in a point a little anteriorly to them. The same is the case in the other five species already named.

The Trogons being thus, as I have shown, not desmognathous, would have, if Prof. Huxley's group of "Coccygomorphae" were retained, to be removed thence to some other position, presumably in his suborder "Schizognathae." But, in fact, as we now know from Prof. Garrod's investigations¹, the so-called Coccygomorphae are an artificial group, made up of at least three very distinct series of birds. Furthermore, the fact that the Trogons are schizognathous, whereas their near allies, such as the Bucconidae, Galbulidae, Coraciidae, *Podargus*, &c., are desmognathous, shows that the structure of the palate has not that unique and peculiar significance that has been claimed for it in the classification of birds.

4. Note on the Systematic Position of *Eupetes macrocercus*.

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Some months ago Mr. R. B. Sharpe directed my attention to the remarkable similarity in general facies of *Eupetes macrocercus* to the

¹ 'Scientific Papers,' pp. 214, 215, &c.

genus *Mesites*, and suggested that that bird might be in reality closely allied to the last-named one, and not at all congeneric with the other species usually included in the genus *Eupetes*.

Our knowledge of the internal structure of *Mesites* is due to M. Alphonse Milne-Edwards, who, in the "Annales des Sciences Naturelles"¹ has described its osteology, with some remarks on the muscles and other points. From its osteology, as well as from the presence of two carotid arteries, and of the ambiens and accessory femoro-caudal muscles, the non-passerine nature of *Mesites* is rendered absolutely certain. M. Milne-Edwards associates it with the Rails. From the presence of powder-down patches², combined with the schizorhinal nature of the skull, I should prefer to locate it near *Eurypyga* and *Rhinochetus* in my group Pluviales³.

It is to be regretted that M. Milne-Edwards has not in any way touched upon the pterylosis of *Mesites*; and as yet I have been unable to obtain any skin of that form to supplement this deficiency. From a skin of *Eupetes macrocercus* I have, however, been able to ascertain a sufficient number of points to show that, unlike *Mesites*, this form is certainly Passerine.

The pterylosis is quite Passerine, there being a nude oil-gland, twelve rectrices, and nineteen remiges, of which ten are primaries. Of these last the tenth (or so-called "first") is half as long as the ninth. The saddle of the dorsal tract is covered by very long feathers, some being as much as 3 inches in length. The aftershaft is apparently quite absent, as is the case in some other Passeres (e. g. *Artamus* and *Eurylæmus*) according to Nitzsch. There are no traces of any powder-down patches.

In the leg there is no plantar vinculum, as in all the Eleuthero-dactylous Passeres⁴, and as in them only, if we except *Upupa* and certain Ardeidæ.

The arrangement of the terminal tendon of the *tensor patagii brevis* is also Passerine, as described by Garrod⁵, with the slight difference that, as in *Menura* and *Atrichia*⁶, the recurrent tendon is more or less intimately blended with that of the *extensor metacarpi* subjacent to it.

The skull, extracted from the skin, is also typically Passerine, with the characteristically truncated vomer of those birds. The maxillo-palatines are long and thin, and recurved apically; the transpalatines well developed. Like all other known Old-World Passeres, *Eupetes* is holorhinal.

The exact place in the Passerine series of *Eupetes* has yet to be determined; judging, however, from the bilaminate tarsal planta, it is a truly Oscine form, and therefore very probably to be included in the "Timeliidæ."

¹ 6^e série, Zool. t. vii. art. no. 6, pl. vii.

² First discovered by Mr. E. Bartlett, vide P. Z. S. 1877, p. 299.

³ *Antea*, p. 639.

⁴ P. Z. S. 1880, p. 391.

⁵ 'Scientific Papers,' pp. 356, 357.

⁶ L. c. p. 358, pl. xxiv. fig. 2.